Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)
Approved for use through xx/xx/200x. OMB 0651-00xx
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PRE-APPEAL BRIEF REQUEST FOR REVIEW

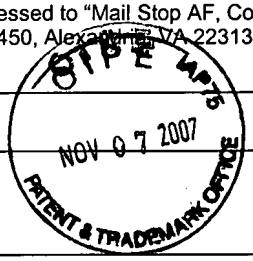
Docket Number (Optional)
MR2919-17

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on _____

Signature _____

Typed or printed name _____



Application Number	Filed
09/416,098	12 October 1999

First Named Inventor
TERESA H. MENG, ET AL.

Art Unit	Examiner
2611	E.Y. Zheng

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 40,262

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature

Jun Y. Lee
Typed or printed name

(410) 465-6678
Telephone number

11/6/2007
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 2 forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Teresa H. Meng, et al.	: Group
Serial No:	09/416,098	: Art Unit #2611
Filed:	12 October 1999	: Examiner:
Title:	METHOD AND APPARATUS FOR ELIMINATING THE EFFECTS OF FREQUENCY OFFSETS IN A DIGITAL COMMUNICATION SYSTEM	: E.Y. Zheng

REMARKS IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop - AF
Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Amendment filed by Applicants on 21 May 2007, the Examiner issued a final Office Action rejecting all pending Claims, Claims 1, 4-5, 8-9, 15, 18-19, 22-23, 29, 31, and 34-35, exclusively on 35 U.S.C. § 112 grounds. The Examiner cited the first and second paragraphs of § 112 in rejecting the Claims for containing subject matter not adequately described in the Specification and failing to adequately set forth the subject matter regarded as the invention. The Examiner took the Specification to preclude making combined use of both the sampling "and" carrier frequency offset corrections disclosed.

The Examiner reasons that because a first embodiment is directed specifically to digital correction of carrier frequency offsets (page 8, lines 8-9; Fig. 2) and a second embodiment is directed specifically to digital correction of sampling frequency offsets (page 10, lines 16-17; Fig. 4), such corrections for the two types of

frequency offsets are mutually exclusive, and therefore improper to combine together in a single Claim. In support, the Examiner inexplicably states that "[i]t nowhere in specification explicitly discloses that the two types of frequency offsets are to be combined" (Office Action, page 2, lines 14, 15). The Examiner then points to the schematic illustrations of FIGS. 2 and 4 showing the same input and output signal labels with each of the frequency offset type corrections as being conclusive indication of this mutual exclusivity between the different corrections.

It is respectfully submitted that the Examiner's assertions are unfounded and clearly in error for at least the following reasons:

1. The Specification does explicitly disclose combining the use of the corrections shown for both types of frequency offsets – namely, carrier frequency offsets and sampling frequency offsets; and,

2. The Specification and Drawings do not in any reasonably discernable way render the disclosed corrections for different frequency offset types mutually exclusive.

1. The Specification does explicitly disclose combining the use of the corrections shown for both types of frequency offsets.

Throughout the specification, it is clearly noted that there are two separate sources of frequency offset error requiring correction: (1) sampling and (2) carrier frequency offsets – and that **both** should be corrected for if the given communication system is to function properly. None other than the very first paragraph of the Specification states: "[t]he present invention relates to digital communications, and more particularly, to methods for correcting carrier frequency **and** sampling

frequency at the transmitter to eliminate the effects of offsets in such frequencies," (Page 1; lines 6-10, *emphasis added.*)

While the Specification, in the interests of clarity and brevity, describes these corrections one at a time in more detail, it does not anywhere require either type of correction to be used only at the exclusion of the other. To the contrary, the Specification explicitly states that "in general" there are "two sources of frequency offsets: carrier frequency offsets **and** sampling frequency offsets" which must be accounted for to fully eliminate the effects of frequency offset in a digital communication system (Page 1, lines 16-17, *emphasis added*).

It goes on to describe FIG. 1 to "illustrate[] a communication system in accordance with the invention" (page 6, lines 2-3, *emphasis added*). The Detailed Description of the Invention accordingly notes that "FIG. 1 illustrates a preferred embodiment," and that "[t]he carrier **and** sampling frequency offsets introduced by various remote units, if not appropriately corrected during transmission, will destroy the stationary properties of the combined signal as received by the base station," (Page 7, lines 5, 10-13, *emphasis added*). The discussion then states quite unambiguously that "[a]ccording to an aspect of the invention, therefore, **each** remote unit 100 corrects the frequency offsets during transmission," (Page 7, lines 13-15, *emphasis added*). There is no question that each transceiver 100-1, 100-2,..., 100-n shown in FIG. 1 is, according to such "aspect of the invention," to be equipped for both carrier and sampling frequency offset correction measures "as described in more detail below" (Specification referring to the respective descriptions to follow).

Having thus provided an overview of the communication system generally disclosed in accordance with the invention, the Specification moves on to more closely describe in turn how, schematically, each of the carrier and sampling frequency offsets may be reliably corrected for - within each remote unit 100 represented in FIG. 1. The Specification follows this detailed description of each frequency offset correction scheme by repeating and reiterating once again that "the transmitter can adjust its carrier frequency **and**/or sampling frequency accordingly," (Page 18, lines 17-19, *emphasis added*). Even the Abstract as originally filed states, "[t]he present invention aims at eliminating the effects of frequency offsets between two transceivers," such "that the signal received by the original transmitter is in sampling **and** carrier frequency lock with the original transmitter's local frequency reference," (Abstract, *emphasis added*).

Such unambiguous explication as to both the rationale for, and the fact of, combining both sampling **"and"** carrier frequency offset corrections in the communication system shown in FIG. 1 belie the Examiner's assertions to the contrary. While the Specification certainly permits the use of just one type of correction, it just as certainly contemplates the combined use of both.

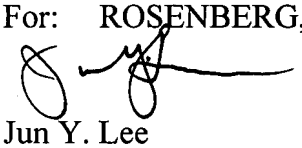
2. The Specification and Drawings do not render the disclosed corrections for different frequency offset types mutually exclusive.

The Examiner makes much of FIGS. 2 and 4 (which schematically illustrate examples for the two frequency offset correction types) employing the same labels to indicate their input and output signals, but such generic labeling hardly imputes mutual exclusivity to the two corrections types. Even if its other affirmative

statements noted above were entirely ignored, the Specification observes in the Discussion of the Related Art that "[c]onventionally, such frequency offsets are... detected and corrected during processing," albeit in considerably deficient manner, and "only...at the receiver end," (Page 2, lines 3-4). It observes that a known "receiver can employ a carrier frequency lock loop to determine the carrier frequency offset and a delay lock loop to determine the sampling frequency offset," (Page 2, lines 4-6) yet fail to provide sufficient degree of correction. It goes on to list publications exemplifying similarly unsuccessful attempts to address the different frequency offset errors entirely at the signal receiving end. Clearly, there is no basis for the Examiner's conclusion of mutual exclusivity as to the very corrective measures disclosed by the Specification to address such unsuccessful prior attempts – to address the collective effects of both frequency offset types.

For all the foregoing reasons, it is believed that the rejections set forth against the pending Claims in the presently outstanding final Office Action are unfounded. Accordingly, it is believed that the subject Patent Application is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,
For: ROSENBERG, KLEIN & LEE



Jun Y. Lee
Registration #40,262
Dated: 11/6/2007

Suite 101
3458 Ellicott Center Drive
Ellicott City, MD 21043
(410) 465-6678
Customer No. 04586